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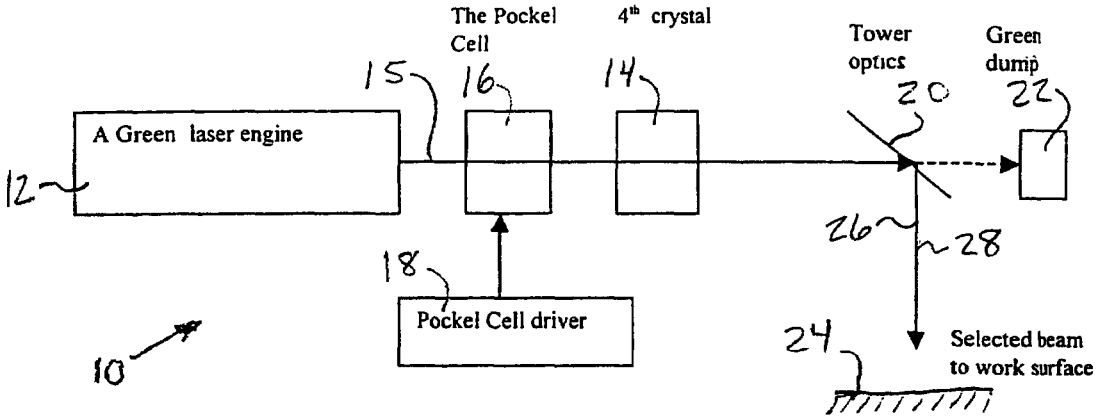
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(54) Title: SWITCHABLE WAVELENGTH LASER-BASED ETCHED CIRCUIT BOARD PROCESSING SYSTEM



(57) Abstract: A wavelength switchable laser (10) of this invention is based on a solid-state laser source (12) in which a fourth harmonic UV laser beam (26) is ordinarily used for processing, and a second harmonic "green" laser beam (28) is dumped and wasted. However, thisinvention uses the ordinarily wasted green laser beam for processing ECB (30) conductor layers (32, 36), which enhances processing throughout because of the higher power of thegreen energy than of the UV energy. A Pockel cell (16) effects laser beam polarizationswitching that causes either the green beam or the UV beam to be directed to the ECB forprocessing different materials. This invention requires only a single rail laser source and is, therefore, simple, cost effective, efficient, inherently aligned, and has high processing throughput.

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